

SUBNERO WIRELESS INTEGRATED SUITE

ADCP Edition

INTEGRATED WIRELESS DATA TRANSFER SOLUTION FOR ADCP



Wireless Data Transfer

Access ADCP data over wireless links in near real-time



Seamless User Experience

Web-based UI to summarize and download the data



Overall Cost Reduction

Streamlined operations driving down deployment costs

SWIS ADCP Edition

Subnero Wireless Integrated Suite (SWIS), ADCPs Edition provides a seamless end-to-end solution for the wireless transfer of data from Acoustic Doppler Current Profilers (ADCPs) to avoid uncertainties during long-term deployments. The intuitive web-based user interface and Content-Aware Processing (CAP) engine let the user effectively manage multiple deployments to drive down the overall costs.

CHALLENGE

Acoustic Doppler Current Profilers (ADCP) are essential to many subsea operations. However, accessing the data collected during a deployment is a challenge. Typical operations rely on physically retrieving the devices (using divers) to download the data after the deployment or using a cable to connect to a topside platform (e.g. buoy) for real-time data transfer. Both of these approaches are logically challenging, expensive, and have safety concerns. It is also difficult for many ADCPs to be deployed in a single operation using these methods. Integration of a traditional acoustic modem that provides a pass-through wireless link can cause data loss and poor connectivity resulting in a poor user experience.



SOLUTION

The Subnero Wireless Integrated Suite (SWIS) equips ADCPs with a WNC series acoustic modem for wireless data transfer. The modems periodically sync with the ADCP and apply machine learning models to create user-defined smart previews using the Content-Aware Processing (CAP) engine. The smart previews or entire data files can be downloaded to the user's laptop or smartphone over a high-performance acoustic link with the single click of a button. A modern intuitive web-based dashboard provides all relevant information including device status, pitch, battery voltage, etc. in one place. Smart scheduler provides optimized power consumption to support long deployments. Overall, SWIS abstracts away the complexities of seabed mounted ADCP deployments to provide a seamless user experience.

HOW IT WORKS?

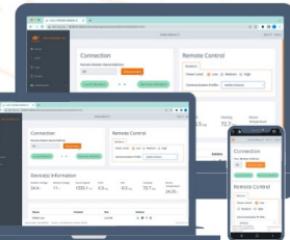
PRE-DEPLOYMENT

1. After ADCP configuration, select the preferred smart schedule based on the deployment requirement from the web UI.
2. Connect the ADCP, modem, and battery using the supplied underwater cable.
3. Deploy the seabed system.

DATA DOWNLOAD



1. Connect the topside unit to the user's laptop or smartphone.
2. Establish a connection to the seabed unit using the "Connect" button.
3. The list of available files for download is displayed.
4. Users may choose to create and download a smart preview or the original file.
5. Download progress is displayed.
6. Once downloaded, the user may open it using the ADCP vendor's software.
7. The user may disconnect and the seabed unit enters sleep state.



Supports both automatic (e.g. buoy) and manual data download (e.g. boat)

SWIS FEATURES



Data Summarization

CAP engine providing data summary for whole deployments

Early Fault Detection

Easy retrieval of ADCP status information such as mode, pitch, battery voltage etc.

Smart Scheduling

Supporting regular and ad hoc data downloads with power savings

Remote Control

Ability to remotely configure the setup during deployment

Fault Tolerance

Multiple data copies providing protection against equipment failure

TECHNICAL SPECIFICATIONS

FEATURES	DETAILS
Supported WNC devices	M25M or S60H series modems
Smart previews	Yes, supported using CAP engine
Smart scheduler	Yes, supported on Gen 4 WNC series
Smart profiles	Yes, supported on Gen 4 WNC series
WNC device storage	32 GB (upgradable)
Communication interfaces	Ethernet, RS232, WiFi*
Endurance	Up to 6 months**
User interface	Web-based dashboards

* With third party WiFi router.

** Depending on deployment schedule and battery pack.